

REMARKS

Claim 1 and claim 10 are amended by substituting the wording “y is N or N together with O” with “y is N together with O” in order to limit the claims to the situation where both O and N is present (i.e. so that the ratio O:N is not 0:100).

Further, claims 1 and 12 are amended by limiting the ratio O:N from “higher than 65:35” to “higher than 45:55”, in order to distinguish the claims over Kobayashi et al. Support for this amendment can be found in Example 3.

Also, claim 10 and 12 are amended by introducing the feature “whereby the composition comprises SiO₂”, in order to satisfy the request of the Examiner and to distinguish the claim over the cited prior art. Support for this amendment can be found on e.g. page 5, line 6-10, as well as in the Example section.

Further, claim 7, 14 and 15 are amended by correcting “Gpa” to “GPa”.

Regarding inventiveness for claim 1 (and for claim 10 and 12) it is argued that *Kobayashi et al.* indeed discloses an oxynitride glass having a certain hardness, and especially from Figure 2 it is shown that an increasing nitrogen content results in an increased hardness. However, this figure does not show any hardness values with regard to compositions comprising more than 30 % nitrogen, indicating that it is not within the scope of *Kobayashi et al.*, and that it is too difficult to provide oxynitride glass having higher nitrogen content.

The basis of the present invention is to provide an oxynitride glass having unexpectedly high nitrogen content, thereby resulting in unexpectedly high hardness values, as a result of unexpected experimentation, or a “stroke of luck” of the inventor. Hence, it was not expected that the glass material of the present invention could be provided. Never the less, the inventor of the present invention succeeded. Therefore, the present invention is non-obvious and inventive.

For *Sterzel*, previous arguments are repeated.

Sterzel discloses amorphous silicon nitride. A conventional process using molecules in gaseous phase is used, whereby reaction with nitrogen-containing molecules is performed in order to provide an amorphous powder. Thus, the resulting material of this process is completely different compared to the invention, in which a nitride glass is produced.

A physical feature of a glass material in the sense of the present invention is that it has a glass transition temperature, across which the glass material can be transferred in a reversible manner.

To the contrary, an amorphous powder (like in *Sterzel*) crystallises in an irreversible manner.

Sterzel discloses (column 3, line 10-14) that the synthesis and handling procedure is completely absent of water and atmospheric oxygen. Furthermore, the material is allowed to crystallize.

In the present invention the amount of nitrogen is maximised (vs the amount of oxygen), in order to obtain e.g. hardness values as high as possible. This is performed in a process, which according to the presented examples involves presence of both oxygen and nitrogen.

Further, since the material of the invention is allowed to pass glass transition temperature, the process is reversible.

Thus, even though *Sterzel* refers to a "glass material" it is a completely different material compared to the present invention.

Further, *Sterzel* discloses that the presence of silicon oxide (column 3, line 10-14) at the powder surface "presents problems", whereas in the present invention it is disclosed that the presence of silicon oxide is preferred during manufacturing of the nitride glass (page 5, line 6-10). See also amendment to claim 10 and 12.

Moreover, *Sterzel* discloses silicon nitride powder, in which silicon is partly replaced by another element (not oxygen). Hence, the material according to *Sterzel* does not include oxygen, which is in contrast to the present invention. This difference further demonstrates the different physio-chemical properties of the material of the invention and the material of *Sterzel*, i.e. a glass and a powder, respectively.

Hence, it is submitted that *Sterzel* refers to a different material compared to the present invention, as well as a different process for obtaining the process, thereby resulting in another material. Thus, the present claims should be allowable in view of *Sterzel*.

In the event there are any questions concerning this Amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of the application may be expedited.

No additional fees are believed to be due at this time however if necessary to effect a timely response the Commissioner is authorised to deduct the necessary fees from Deposit account No. 501249.

Respectfully submitted,

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